FACT SHEET

AFRTS Satellite Information

NewSkies NSS-9 (C-band) *(East Asia/West Pacific)*
Location: 183 degrees East
Band: C
Transponder Antenna polarization: Left-hand circular
Receiver Setting Polarization: "H-fixed" for model 9234 consumer-grade decoders or "H" for commercial-grade decoders with dual-band LNBs
C Band Downlink Frequency: 3.680 GHz
Transponder: 44
L-Band/LO Freq: 1505.875 MHz
Symbol Rate: 28.0000 MS/s
FEC Rate: ¾
35.5 dbw EIRP (Hong Kong)
Network ID: 2
Coverage Map: http://www.newskies.com/satellite.htm *click on the map and select NSS-9 and then the C-band half of the satellite. The north-west zone beam is AFRTS.*

NewSkies NSS-6 (Ku-band) *(Japan/Korea)*
Location: 95 degrees East
Band: Ku
Transponder Antenna polarization: Vertical
Receiver Setting Polarization: "V-fixed" for model 9234 consumer-grade decoders or "H" for commercial-grade decoders with dual-band LNBs
Ku Band Downlink Frequency: 12.647 GHz
L-Band/LO frequency: 2047 MHz* (10.600 MHz LNB Frequency)
Symbol Rate: 28.0000 MS/s
FEC Rate: ¾
EIRP: 53.7 dBW center pattern
Network ID: 4
Coverage Map: http://www.newskies.com/satellite.htm *click on the map and select NSS-6 and then the Ku-band half of the satellite.*

INTELSAT 10-02 (*South America / Africa / Europe / Atlantic Ocean Region)*
Location: 359 degrees East (1 degree West)
Band: C
Transponder Antenna Polarization: RHCP
Receiver Setting Polarization: "H-fixed"
C-Band Frequency: 4.1750 GHz
Transponder: 38
L-Band frequency: 975 MHz
Symbol rate: 28.0000 MS/s
FEC rate: ¾
EIRP: 35 dBW
Network ID 3
Coverage Map:
http://www.intelsat.com/images/en/resources/coverage maps/maps/10-02-359-global.jpg

Galaxy 28 *(United States)*
Location: 89 degrees West
Band: C/L Band
C-band frequency: 4.060 GHz
Transponder: 118
Transponder Antenna Polarization: HP
Receiver Setting Polarization: "H-fixed" for model 9234 consumer-grade decoders or "H" for commercial-grade decoders with dual-band LNBs
L-Band frequency: 1090 MHz
Symbol rate: 28.0000 MS/s
FEC rate: ¾
EIRP: 41.9 dBW
Network ID 9
Coverage Map (not-official):
http://www.intelsat.com/flash/coverage-maps/index.html

HotBird 9 *(Europe)*
Location: 13 degrees East
Band: Ku
Transponder Antenna Polarization: Vertical
Transponder: 129
Receiver Setting Polarization: "H-fixed" for model 9234 consumer-grade decoders or "H" for commercial-grade decoders with dual-band LNBs based on transponder settings Ku Band Downlink Frequency: 10.775 GHz
L-Band/LO frequency: 1025 MHz* (9.750 MHz LNB Frequency)
Symbol rate: 28.0000 MS/s
FEC rate: ¾
EIRP: 50.0 dBW
Network ID 6
Coverage map:
http://www.eutelsat.com/satellites/9e_eb9a_popd.html

Direct To Sailor (DTS) Service

INTELSAT 701 *(Pacific Ocean)*
Location: 180 degrees East
Band: C
Transponder Antenna Polarization: LHCP
Receiver Setting Polarization: "H-fixed"
C-Band frequency: 4.1735 GHz
L-Band frequency: 976.5 MHz
Symbol Rate: 3.6800 MS/s
FEC rate: 2/3
EIRP: 29.0 dBW
Network ID 5
Coverage map:
http://www.intelsat.com/images/en/resources/coveragemaps/maps/701-180-global.jpg (global)

INTELSAT 906 *(Indian Ocean and Persian Gulf)*
Location: 64.1 degrees East
Band: C
Transponder Antenna Polarization: LHCP
Receiver Setting Polarization: "H-fixed"
C-Band frequency: 4093.5 MHz
L-Band frequency: 1056.5 MHz
Symbol Rate: 3.6800 MS/s
FEC Rate: 2/3
EIRP: 29.0 dBW
Network ID 7
Coverage map:
http://www.intelsat.com/images/en/resources/coveragemaps/maps/906-64-global.jpg (global)

New Skies NSS-7
(Atlantic Ocean and Mediterranean Sea)
Location: 338.0 degrees East (22 degrees West)
Band: C
Transponder Antenna Polarization: LHCP
Receiver Setting Polarization: "H-fixed"
C-Band frequency: 4115 MHz
L-Band frequency: 1035 MHz
Symbol Rate: 3.6800 MS/s
FEC Rate: 2/3
EIRP: 30.5 dBW
Network ID 6
Coverage map: http://www.newskies.com/satellite.htm (global)

AMC-1 Ku Band (The Pentagon Channel)
Location: 103 degrees West
Band: Ku
Transponder 20 Polarity: Vertical
Receiver Setting Polarization: Vertical
Ku band frequency: 12.100 GHz*
Symbol Rate: 20,000 MS/s
FEC Rate: ¾
Encryption: none
Coverage map:
http://www.ses-americom.com/americom_2008/siteSections/technical/satelliteFleet/amc1/index.php

*Important note on LNB frequencies:

All C-band LNB's have a local oscillator (L.O.) frequency of 5.150 GHz but Ku-band LNB's may come in many different frequencies typically 9.750 to 12.75 GHz. This means that if you're attempting to watch a Ku-band service you need to set the decoder's frequency using a bit of simple math. The formula to set the Ku-Low/Single L.O. frequency on the AFRTS decoder is the downlink frequency minus the L.O. frequency. As an example the downlink frequency for the INTELSAT 804 satellite serving the Japan and Korea Direct to Home service area is 11.6380 GHz. An LNB with a local oscillator frequency of 10.000 GHz would give a Ku Low/Single L.O. frequency of 1638 MHz (1.638 GHz) by working the math problem 11.16380 – 10.000 = 1.638. The Ku-band satellite serving the European service area is HotBird 4 at 13 degrees east and it has a downlink frequency of 10.775 GHz. Connecting an LNB with a local oscillator frequency of 9.750 would result in a receiver frequency of 1025 MHz (10.775 – 9.750 = 1.025 GHz which is 1025 MHz). **Source:** http://afrts.dma.mil/tech_info/page.asp?pg=tech_info